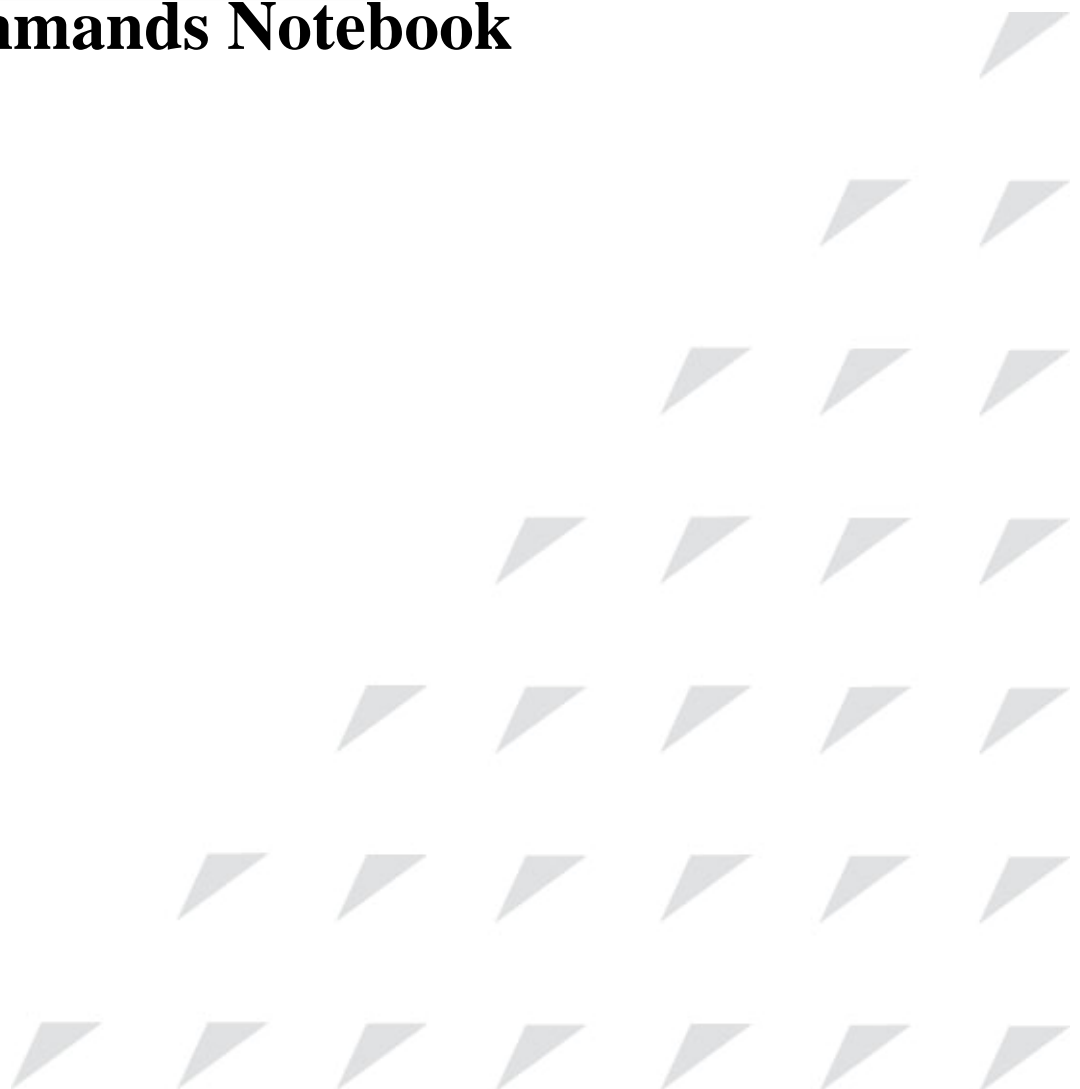


[www.raisecom.com](http://www.raisecom.com)

## **802.1x Commands Notebook**



# CONTENTS



<b>Chapter 1</b>	<b>802.1x Commands</b>	<b>1</b>
1.1	clear dot1x statistics	1
1.2	dot1x	2
1.3	dot1x auth-control	3
1.4	dot1x reauthentication	4
1.5	dot1x timer reauth-period	5
1.6	dot1x timer tx-period	6
1.7	dot1x timer supp-timeout	7
1.8	dot1x timer server-timeout	8
1.9	dot1x timer quiet-period	9
1.10	show dot1x	10
1.11	show dot1x statistics	11
1.12	show radius-server	12

## Chapter 1 802.1x Commands

### 1.1 clear dot1x statistics

#### [Function]

Clear EAPOL statistics of port.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

#### [Command format]

**clear dot1x port-list** *port-list* **statistics**

**clear dot1x line** *line-list* **statistics**

**clear dot1x client** *client-list* **statistics**

#### [Parameter]

*port-list*: port list.

*line-list*: line port list.

*client-list*: client port list.

#### [Command Modes]

Global configuration mode

#### [Executing Command Instruction]

Use this command to clear EAPOL statistics of port.

#### [Explanation of command execution echo]

*Set successfully*

#### [Example]

Clear statistic information of port 1 under global configuration mode:

Raisecom(config)#**clear dot1x port-list 1 statistics**

#### [Related commands]

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i> <b>statistics</b>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i> <b>statistics</b>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i> <b>statistics</b>	Show client port statistic information of 802.1x protocol.

## 1.2 dot1x

### [Function]

Enable/disable global or port 802.1x protocol

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

### [Command format]

**dot1x** {enable/disable}

### [Parameter]

*enable*: enable global/port 802.1x authorization protocol.

*disable*: disable global/port 802.1x authorization protocol.

### [Default]

802.1x of the switch (including global 802.1x features and port 802.1x features) disable

### [Command Modes]

Global configuration mode; physical interface configuration; physical interface range configuration mode

### [Executing Command Instruction]

802.1 protocol can not be enabled on one port with spanning tree protocol. 802.1x protocol is access control based on MAC address, it is better for users don't enable 802.1 feature on integration port and non-Access port. If several users connect on one switch port via sharing network, all the users can access network if only one of them succeeding in authorization; but several users apply authorization at the same time may be effect one and another and cause failure.

Keep RADIUS sever IP address and RADIUS sever public use key configuring correctly can guarantee client software succeed in authorization and the switch can ensure ping through radius server.

### [Explanation of command execution echo]

*Set successfully.*

*Set unsuccessfully.*

*Set successfully.*

*Port x set unsuccessfully.*

*Port x set unsuccessfully.*

802.1x can only be enabled when stp has been disabled on the port.

### [Example]

Enable global 802.1x protocol:

Raisecom(config)# **dot1x enable**

Enable global 802.1x protocol on relevant port under physical interface configuration mode:

Raisecom(config-port)# **dot1x enable**

#### [Related commands]

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.3 dot1x auth-control

#### [Function]

Configure 802.1x authorization for the port.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

#### [Command format]

**dot1x auth-control**{*authorized-force* | *unauthorized-force* | *auto*}

#### [Parameter]

*authorized-force*: force port authorized mode. Indicate the port is always in authorized mode, permit users access network and the service supplied by switch without authorization.

*unauthorized-force*: force port unauthorized mode. Indicate the port is always in unauthorized mode, not permit users access network and the service supplied by switch without authorization.

*auto*: auto-negotiation the authorization mode. Permit transmitting and receiving EAPOL message before authorization, no permit users' access network and the service supplied by switch.

#### [Default]

auto

#### [Command Modes]

physical interface configuration

#### [Executing Command Instruction]

802.1x authorization based on port, this command determines port authorization mode of user direct.

#### [Explanation of command execution echo]

*Set successfully.*

*Port x set unsuccessfully.*

#### [Example]

Using force authorized mode on relevant port under physical interface configuration mode:

Raisecom(config-port)# **dot1x auth-control** *authorized-force*

**[Related commands]**

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.4 dot1x reauthentication

**[Function]**

Configure 802.1x authorization for the port.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

**[Command format]**

**dot1x reauthentication** {*enable* |*disable*}

**[Parameter]**

*enable*: enable 802.1x reauthorization function.

*disable*: disable 802.1x reauthorization function.

**[Default]**

disable

**[Command Modes]**

physical interface configuration

**[Executing Command Instruction]**

System will reauthenticate the authorized port periodically. The authorization state will not change during process of reauthentication.

**[Explanation of command execution echo]**

*Set successfully.*

*Port x set unsuccessfully.*

**[Example]**

Enable reauthentication function on relevant port under physical interface configuration mode:

Raisecom(config-port)# **dot1x reauthentication** *enable*

**[Related commands]**

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.

<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.5 dot1x timer reauth-period

### [Function]

Configure 802.1x port reauthentication timer.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

### [Command format]

**[no] dot1x timer reauth-period** *reauth-period-value*

### [Parameter]

*reauth-period*: reauthentication timer. In the time of this timer setting, system enable 802.1x reauthentication, corresponding configuring value is *reauth-period-value*<1-65536>.

### [Default]

Default configuration of all timers:

Timer	Variable	Configured value
<b>reauth-period</b>	<i>reauth-period-value</i>	3600s

### [Command Modes]

physical interface configuration

### [Executing Command Instruction]

Command **dot1x timer reauth-period** is used to configure 802.1x reauthentication timer configuration value.

Command **no dot1x timer reauth-period** is used to recover default value of 802.1x reauthentication timer configuration value.

### [Explanation of command execution echo]

*Set successfully.*

*Port x set unsuccessfully.*

### [Example]

Set reauthentication timer configuration value on relevant port under physical interface configuration mode:

```
Raisecom(config-port)# dot1x timer reauth-period 2400
```

Set reauthentication timer default value on relevant port under physical interface configuration mode:

```
Raisecom(config-port)# no dot1x timer reauth-period
```

### [Related commands]

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.6 dot1x timer tx-period

### [Function]

Configure port Request/Identity re-sending timer in process of 802.1x authentication.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

### [Command format]

**[no] dot1x timer tx-period** *tx-period-value*

### [Parameter]

*tx-period*: transmission timeout timer, the switch will startup the timer when it sends Request/Identity message to client side. In the time of this timer setting, the switch re-transmit request if user request side fails to send authentication message, corresponding configuring value is *tx-period-value*<10-120>.

### [Default]

Default configuration of all timers:

Timer	Variable	Configured value
<b>tx-period</b>	<i>tx-period-value</i>	30s

### [Command Modes]

physical interface configuration

### [Executing Command Instruction]

Command **dot1x timer tx-period** is used to configure timer configuration value of re-transmitting Request/Identity message by 802.1x.

Command **no dot1x timer tx-period** is used to recover timer configuration value of re-transmitting Request/Identity message by 802.1x.

### [Explanation of command execution echo]

*Set successfully.*

*Port x set unsuccessfully.*

### [Example]

Set Request/Identity re-transmitting timer configuration value on relevant port under physical interface configuration mode:

Raisecom(config-port)# **dot1x timer tx-period 2400**



Recover default value of Request/Identity re-transmitting on relevant port under physical interface configuration mode:

Raisecom(config-port)# **no dot1x timer tx-period**

**[Related commands]**

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.7 dot1x timer supp-timeout

**[Function]**

Configure port Request/Challenge re-transmitting timer in process of 802.1x authentication.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

**[Command format]**

**[no] dot1x timer supp-timeout** *supp-timeout-value*

**[Parameter]**

*supp-timeout*: Supplicant authorization timeout timer, the switch will startup supp-timeout timer when it send Request/Challenge message to client side (the message is used to request encrypt MD5 content). In the time of this timer setting, the switch re-transmit request if user request side fails to response, corresponding configuring value is *supp-timeout-value*<10-120>.

**[Default]**

Default configuration of all timers:

Timer	Variable	Configured value
<b>supp-timeout</b>	<i>supp-timeout-value</i>	30s

**[Command Modes]**

physical interface configuration

**[Executing Command Instruction]**

Command **dot1x timer supp-timeout** is used to configure timer configuration value of re-transmitting Request/Challenge message by 802.1x.

Command **no dot1x timer supp-timeout** is used to recover timer configuration value of re-transmitting Request/Challenge message by 802.1x.

**[Explanation of command execution echo]**

*Set successfully.*

*Port x set unsuccessfully.*

**[Example]**

Set Request/Challenge re-transmitting timer configuration value on relevant port under physical interface configuration mode:

```
Raisecom(config-port)# dot1x timer supp-timeout 2400
```

Recover default value of Request/Challenge re-transmitting on relevant port under physical interface configuration mode:

```
Raisecom(config-port)# no dot1x timer supp-timeout
```

**[Related commands]**

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.8 dot1x timer server-timeout

**[Function]**

Configure server timeout timer of 802.1x port.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

**[Command format]**

```
[no] dot1x timer server-timeout server-timeout-value
```

**[Parameter]**

*server-timeout*: Authorization Server timeout timer. The timer define 802.1x protocol entity and radius server community timeout total time. Radius re-send times and sending interval is decided by switch radius client side. The re-send time of switch radius client side is 3 and waiting time for every time is 5 seconds.

**[Default]**

Default configuration of all timers:

Timer	Variable	Configured value
<b>server-timeout</b>	<i>server-timeout-value</i>	100s

**[Command Modes]**

physical interface configuration

**[Executing Command Instruction]**

Command **dot1x timer server-timeout** is used to configure timer configuration value of 802.1x server.

Command **no dot1x timer server-timeout** is used to recover timer configuration value of 802.1x server.

**[Explanation of command execution echo]**

*Set successfully.*

*Port x set unsuccessfully.*

**[Example]**

Set server timer configuration value on relevant port under physical interface configuration mode:

```
Raisecom(config-port)# dot1x timer server-timeout 2400
```

Recover default value of server-timeout timer on relevant port under physical interface configuration mode:

```
Raisecom(config-port)# no dot1x timer server-timeout
```

**[Related commands]**

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.9 dot1x timer quiet-period

**[Function]**

Configure quiet period timer of 802.1x port.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

**[Command format]**

**[no] dot1x timer quiet-period** *quiet-period-value*

**[Parameter]**

*quiet-period*: quiet period timer. After user fail to authentication, the switch need a quiet period and this period is determined by quiet period timer and then initiate authentication again. The switch in quiet period deals with no message. Relevant configuration value is *quiet-period-value* <10-120>.

**[Default]**

Default configuration of all timers:

Timer	Variable	Configured value
<b>quiet-period</b>	<i>quiet-period-value</i>	60s

**[Command Modes]**

physical interface configuration

**[Executing Command Instruction]**

Command **dot1x timer quiet-period** is used to configure timer configuration value of 802.1x quiet period.

Command **no dot1x timer quiet-period** is used to recover timer configuration value of 802.1x quiet period.

#### [Explanation of command execution echo]

*Set successfully.*

*Port x set unsuccessfully.*

#### [Example]

Set quiet period timer configuration value on relevant port under physical interface configuration mode:

Raisecom(config-port)# **dot1x timer quiet-period 2400**

Recover default value of quiet period timer on relevant port under physical interface configuration mode:

Raisecom(config-port)# **no dot1x timer quiet-period**

#### [Related commands]

Commands	Description
<b>show dot1x port-list</b> <i>port-list</i>	Show port statistic information of 802.1x protocol.
<b>show dot1x line</b> <i>line-list</i>	Show line port statistic information of 802.1x protocol.
<b>show dot1x client</b> <i>client-list</i>	Show client port statistic information of 802.1x protocol.

## 1.10 show dot1x

#### [Function]

Review configuration information of port 802.1x.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

#### [Command format]

**show dot1x port-list** *port-list*

**show dot1x line** *line-list*

**show dot1x client** *client-list*

#### [Parameter]

*port-list*: port list.

*line-list*: line port list.

*client-list*: client port list.

#### [Command Modes]

Privileged EXEC mode

**[Executing Command Instruction]**

Use this command to review port 802.1x configuration information.

**[Example]**

Show configuration information of particular 802.1x port under privileged EXEC mode:

Raisecom#**show dot1x port-list 1**

**[Related commands]**

Commands	Description
<b>dot1x</b> { <i>enable</i>   <i>disable</i> }	Enable/disable 802.1x authorization based on port.
<b>dot1x auth-control</b> { <i>authorized-force</i>   <i>unauthorized-force</i>   <i>auto</i> }	Configure 802.1x port authorization mode.
<b>dot1x reauthentication</b> { <i>enable</i>   <i>disable</i> }	Configure 802.1x port reauthentication function.
<b>dot1x timer reauth-period</b> <i>reauth-period-value</i>	Configure 802.1x port reauthentication timer
<b>dot1x timer tx-period</b> <i>tx-period-value</i>	Configure re-transmitting Request/Identity timer of 802.1x port.
<b>dot1x timer supp-timeout</b> <i>supp-timeout-value</i>	Configure re-transmitting Request/Challenge timer of 802.1x port.
<b>dot1x timer server-timeout</b> <i>server-timeout-value</i>	Configure radius server authentication total time out time.
<b>dot1x timer quiet-period</b> <i>quiet-period-value</i>	Configure 802.1x port quiet period timer.

## 1.11 show dot1x statistics

**[Function]**

Clear EAPOL statistics of port.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

**[Command format]**

**show dot1x port-list** *port-list* **statistics**

**show dot1x line** *line-list* **statistics**

**show dot1x client** *client-list* **statistics**

**[Parameter]**

*port-list*: port list.

*line-list*: line port list.

*client-list*: client port list.

**[Command Modes]**

Privileged EXEC mode

**[Executing Command Instruction]**

Use this command to query port statistic information during authentication.

**[Example]**

Show statistic information of port 1 under privileged EXEC mode:

Raisecom# **show dot1x port-list 1 statistics**

**[Related commands]**

Commands	Description
<b>clear dot1x port-list <i>port-list</i> statistics</b>	Clear port statistic information.
<b>clear dot1x line <i>line-list</i> statistics</b>	Clear line port statistic information.
<b>clear dot1x client <i>client-list</i> statistics</b>	Clear client port statistic information.

## 1.12 show radius-server

**[Function]**

Show configuration of RADIUS server.

This command is available to ISCOM2000/2100/2800/2900/3000 series and 5X1-4FE.

**[Command format]**

**show radius-server**

**[Command Modes]**

Privileged EXEC mode

**[Executing Command Instruction]**

Before using 802.1x authentication, configure RADIUS server IP, KEY and other information correctly. This command will show RADIUS server configuration information.

**[Example]**

Show configuration information of RADIUS server under privileged EXEC mode:

Raisecom# **show radius-server**

**[Related commands]**

Commands	Description
<b>radius <i>ipaddress</i></b>	Set authentication server IP.
<b>radius-key <i>string</i></b>	Set public key among RADIUS servers.



**北京瑞斯康达科技发展有限公司**  
**RAISECOM TECHNOLOGY CO.,LTD.**

Address: 2<sup>nd</sup> Floor, South Building of Rainbow Plaza, No.11 Shangdi Information Road,  
Haidian District, Beijing Postcode: 100085 Tel: +86-10-82883305 Fax: +86-10-82883056  
Email: [export@raisecom.com](mailto:export@raisecom.com) <http://www.raisecom.com>